

IN THE CLAIMS

1. (currently amended): A liquid crystal display with an integrated color filter, comprising:

- an active matrix substrate with a plurality of switching elements;
- an insulating layer formed on the active matrix substrate;
- a double-organic layer formed on the insulating layer;
- a plurality of pixel electrodes formed on the double-organic layer, and electrically connected to the respective switching elements via a plurality of respective contact holes;
- a substrate positioned a predetermined distance above the active matrix substrate; and
- a liquid crystal layer between the two substrates;

wherein the color-filter units layer is formed above the transparent organic layer; and

wherein the double-organic layer comprises a plurality of color-filter units and a transparent organic layer, and the thickness of the color-filter units is approximately 1.0 μm , thereby reducing parasitic capacitance of the liquid crystal display without sacrificing light transmission.

2.-3. (canceled)

4. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the transparent organic layer is formed above the color-filter units layer.

5. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the transparent organic layer is formed of polycarbonate or acrylic-resin.

6. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the light transmission of the transparent organic layer is above 90%.

7. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the dielectric constant of the transparent organic layer is 2.6-3.6.

8. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the thickness of the transparent organic layer is 1.5-3.5 μ m.

9. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the dielectric constant of the color-filter units is 3.5-5.0.

10. (canceled)

11. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the color-filter units includes red, green and blue units.

12. (original): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the pixel electrodes are made of indium tin oxide.

13. (original): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the contact holes pass through the insulating layer and the double-organic layer.

14. (previously presented): An integrated color filter, comprising:
a substrate;
a plurality of switching elements formed on the substrate in a matrix arrangement;
an insulating layer formed on the switching elements;
a transparent organic layer formed above the insulating layer;
a plurality of color-filter units formed above the transparent organic layer; and
a plurality of pixel electrodes formed above the color-filter units, and electrically connected to the respective switching elements via a plurality of respective contact holes,

wherein the contact holes pass through the transparent organic layer, color-filter units and the insulating layer;

wherein the thickness of the color-filter units is approximately 1.0 μm , thereby reducing parasitic capacitance of the liquid crystal display without sacrificing light transmission.

15. (canceled)

16. (previously presented): A method of fabricating an integrated color filter, comprising:
providing a substrate;
forming a plurality of switching elements on the substrate in a matrix arrangement;
forming an insulating layer on the switching elements;
forming a transparent organic layer on the switching elements, wherein the transparent organic layer has a first hole exposing a part of the surface of the insulating layer;
etching the insulating layer by using the transparent organic layer as an etching mask to form a second hole in the insulating layer, wherein the second hole joins the first hole and exposes a part of the surface of the switching elements;
forming a plurality of color-filter units with a third hole on the transparent organic layer, wherein the third hole forms a contact hole together with the first and the second holes to expose the part of the surface of the switching elements; and
forming a plurality of pixel electrodes on the color-filter units, wherein the pixel electrodes are electrically connected with the switching elements via the contact hole;
wherein the thickness of the color-filter units is approximately 1.0 μm , thereby reducing parasitic capacitance of the liquid crystal display without sacrificing light transmission.

17. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the transparent organic layer is made of polycarbonate or acrylic-resin.

18. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the light transmission of the transparent organic layer is above 90%.

19. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the dielectric constant of the transparent organic layer is 2.6-3.6.

20. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the thickness of the transparent organic layer is 1.5-3.5 μ m.

21. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the dielectric constant of the color-filter units is 3.5-5.0.

22. (canceled)

23. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the color-filter units includes red, green and blue units.

24. (original): The method of fabricating an integrated color filter as claimed in claim 16, wherein the pixel electrodes are made of indium tin oxide.

25.-33. (canceled)

34. (previously presented): The liquid crystal display with an integrated color filter as claimed in claim 1, wherein the thickness of the color-filter units is less than 1.2 μ m.

35. (previously presented): The method of fabricating an integrated color filter as claimed in claim 16, wherein the thickness of the color-filter units is less than 1.2 μ m.